

PhenoSense™ HIV Resistance Test Vector.

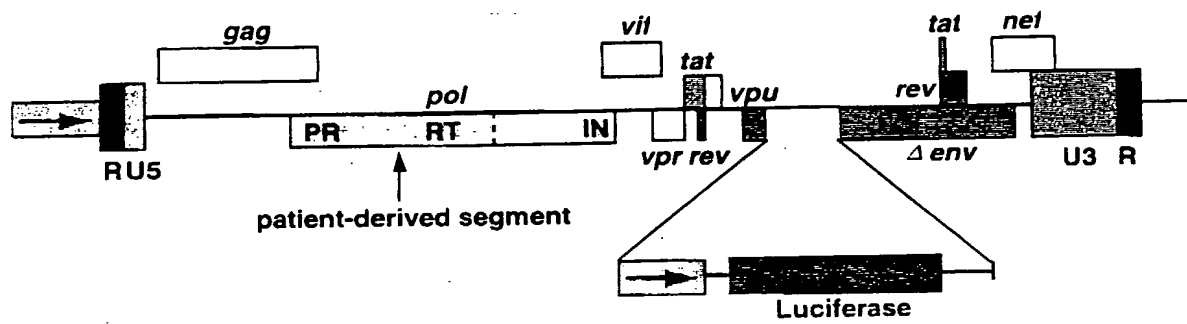


FIG. 2

PhenoSense™ HIV Schematic Diagram.

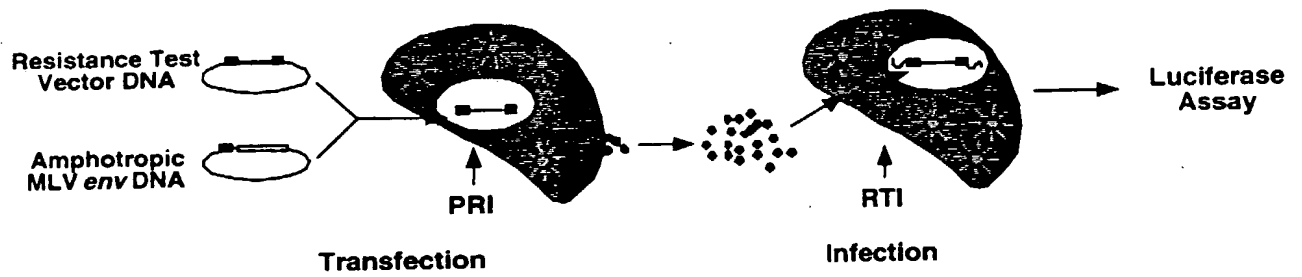
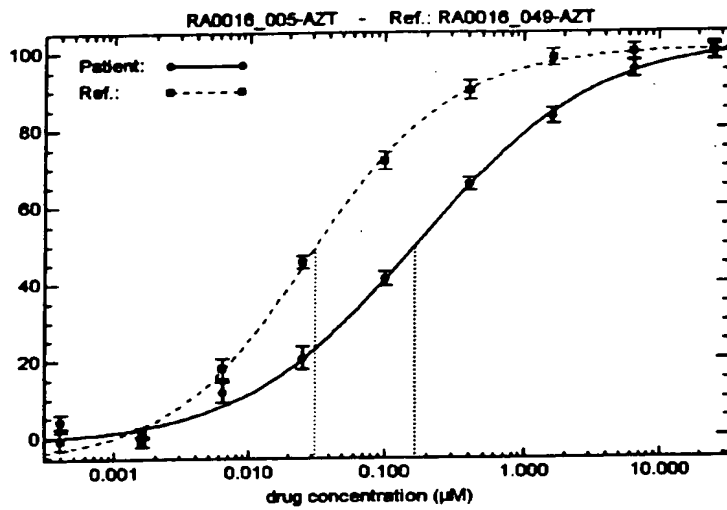


FIG. 3A

NRTI - AZT

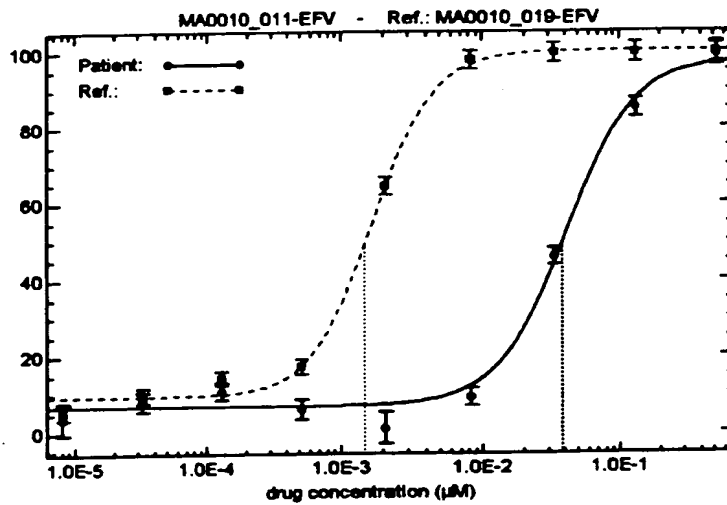


AZT-Control
AZT-Patient

$\text{IC}_{50} = 0.032$
 $\text{IC}_{50} = 0.170$ (5.2-fold)

FIG. 3B

NNRTI - Efavirenz

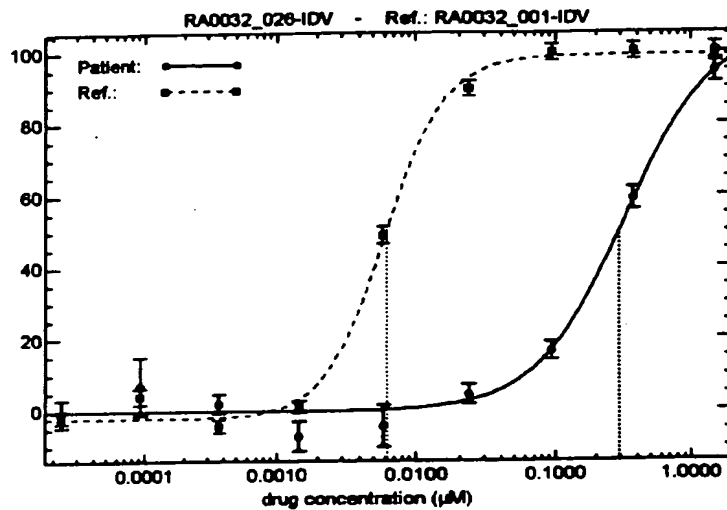


EFV-Control
EFV-Patient

$\text{IC}_{50} = 0.0015$
 $\text{IC}_{50} = 0.0380$ (25.6-fold)

FIG. 3C

PRI - Indinavir



IDV-Control
IDV-Patient

$\text{IC}_{50} = 0.0062$
 $\text{IC}_{50} = 0.2935$ (47.4-fold)

FIG. 4A SQV

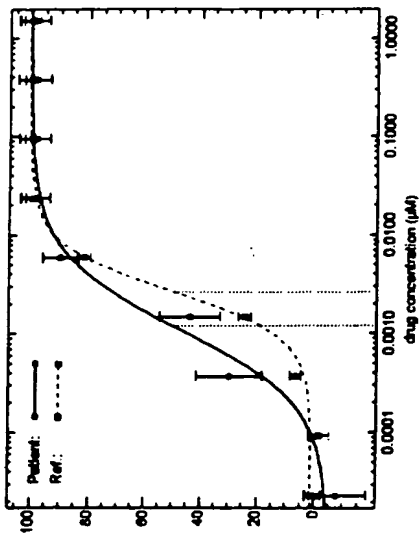


FIG. 4B IDV

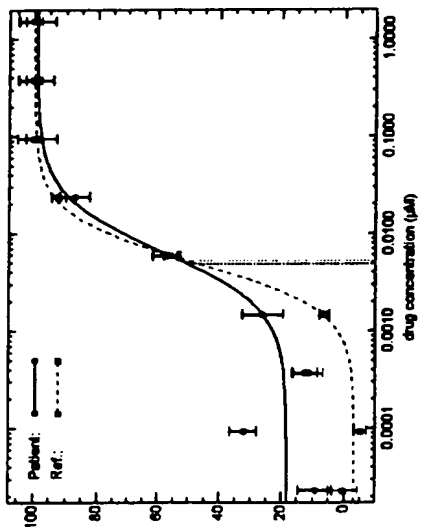


FIG. 4C RTV

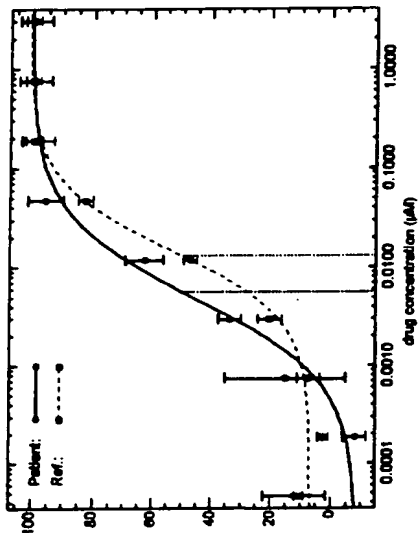


FIG. 4D NFV

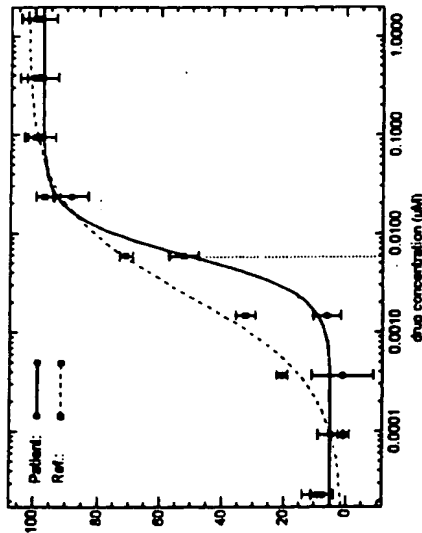


FIG. 4E AMP

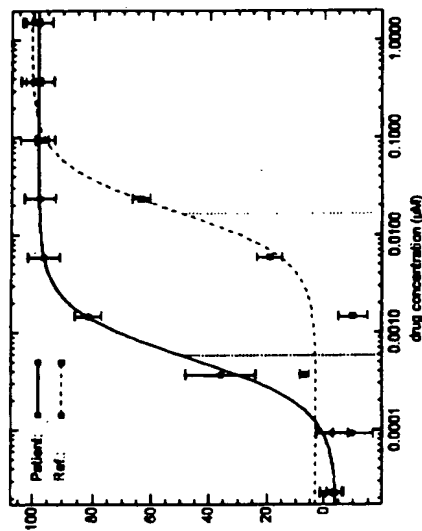


FIG. 5A SQV

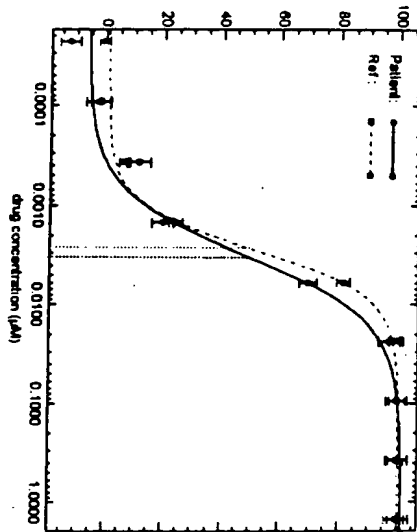


FIG. 5B IDV

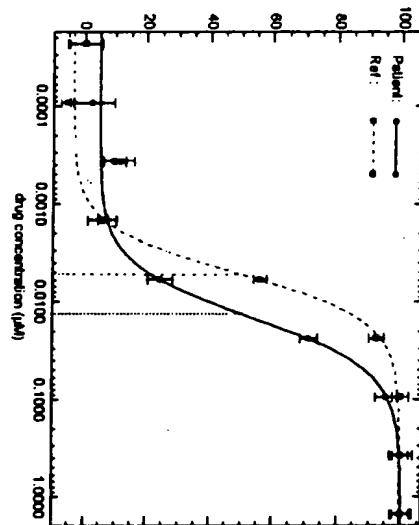


FIG. 5C RTV

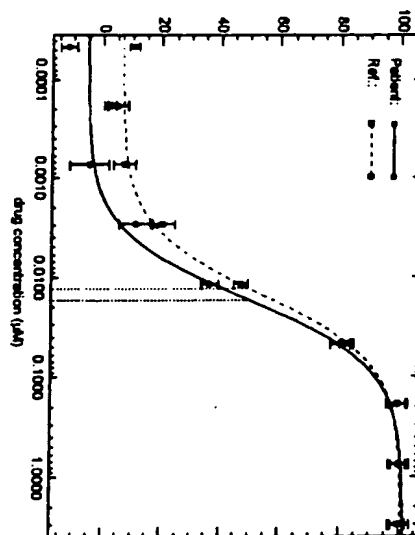


FIG. 5D NFV

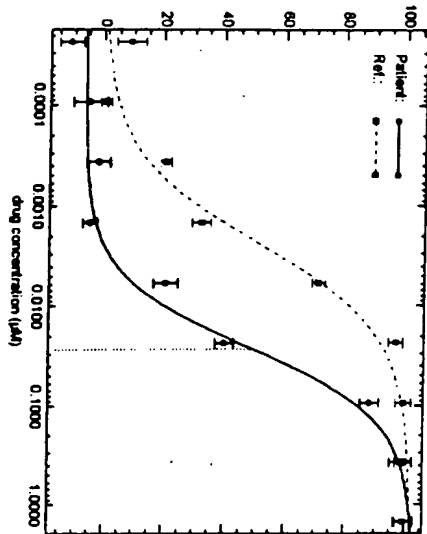
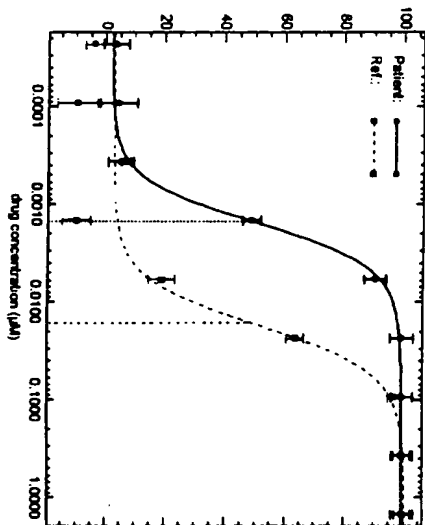


FIG. 5E AMP



00504399-051200

Figure A: Fitness Assay

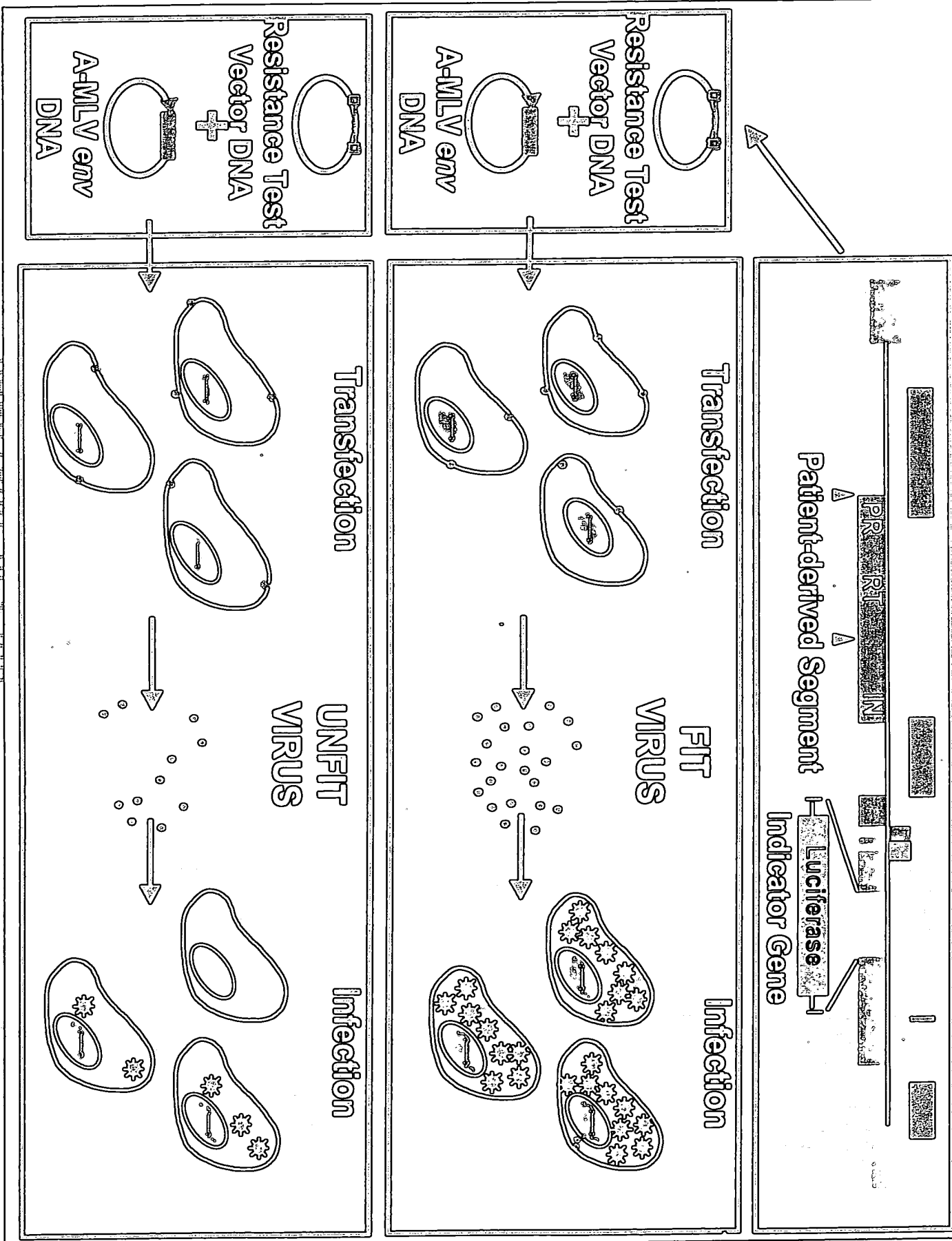
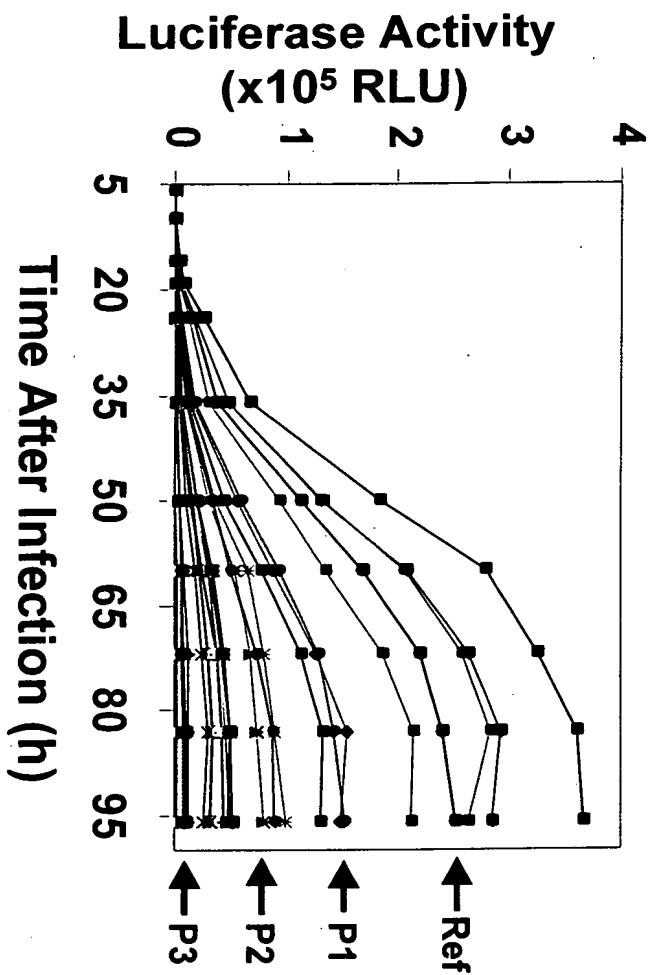


Figure B: Luciferase Activity in Infected Cells



Fold Resistance				
		P 1	P 2	P 3
NRTI	AZT	27	17	6
	3TC	>100	3	>100
NNRTI	NVP	40	0.3	0.3
PRI	SQV	17	68	4
	IDV	30	47	39
	RTV	11	62	63
	NFV	57	55	28
	AMP	4	18	3

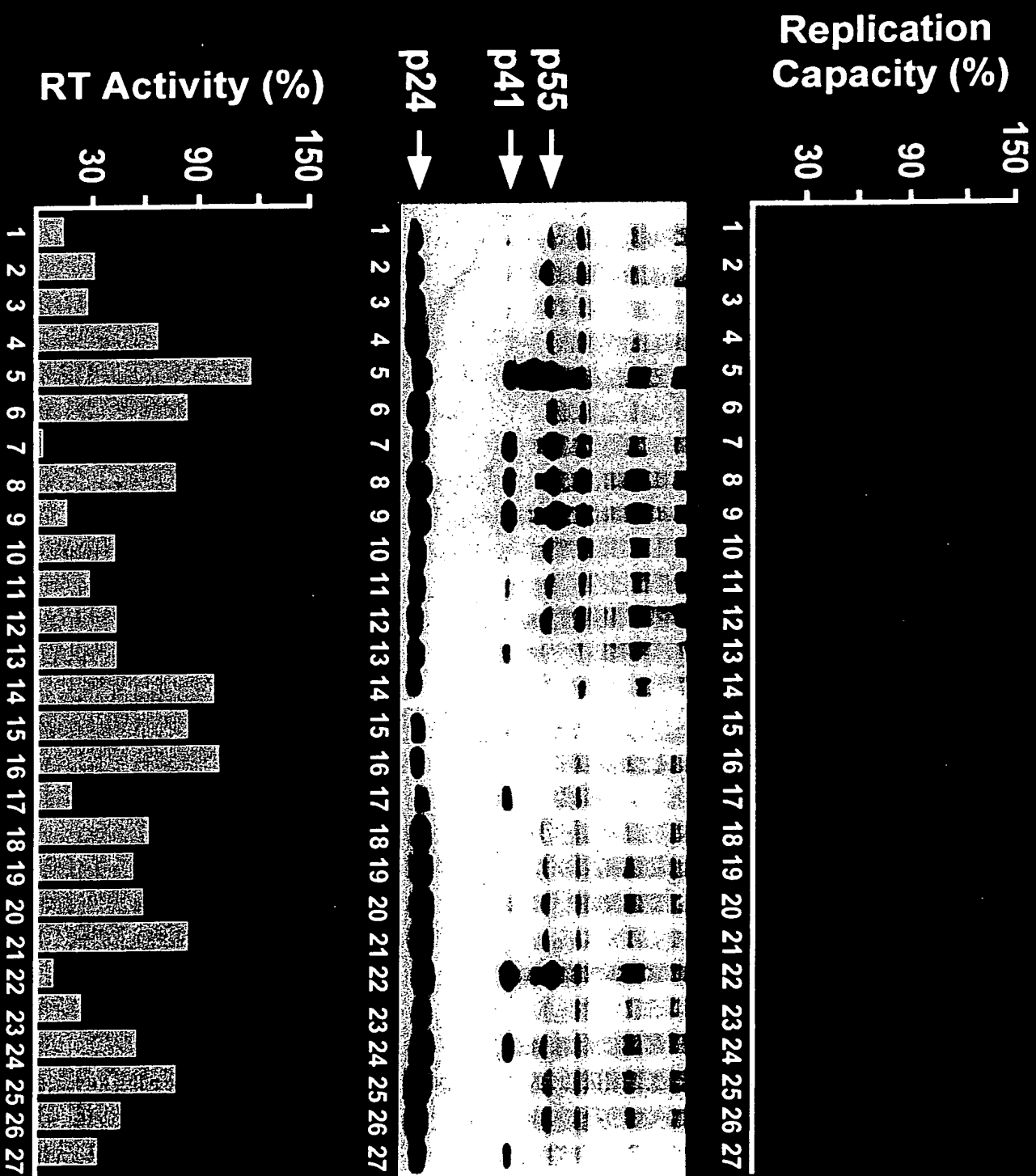
Figure C: Replication Fitness, PR Processing, and RT Activity

Figure D: Site Directed RT Mutants (G190 Series)

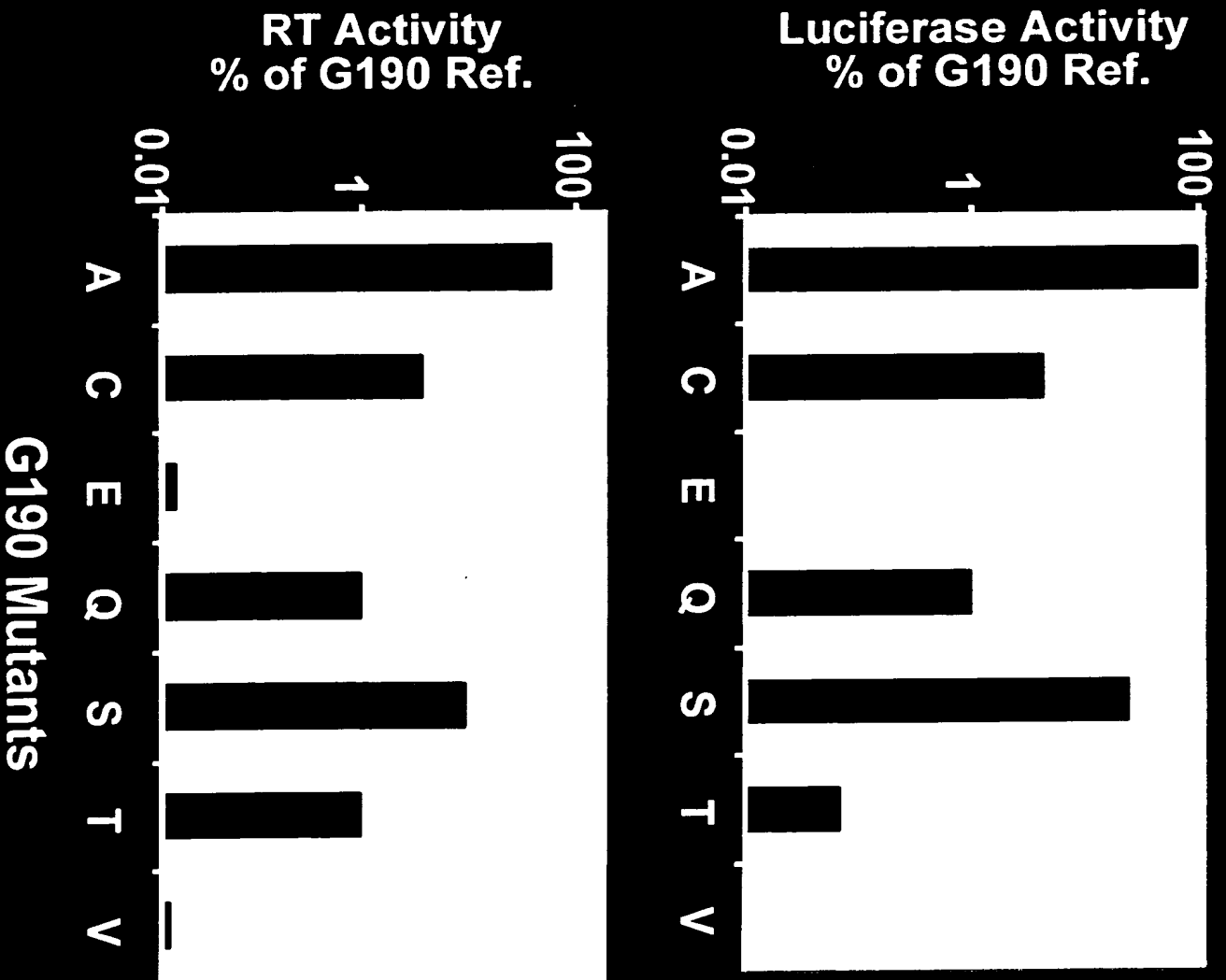


Figure E: Site Directed PR Mutants

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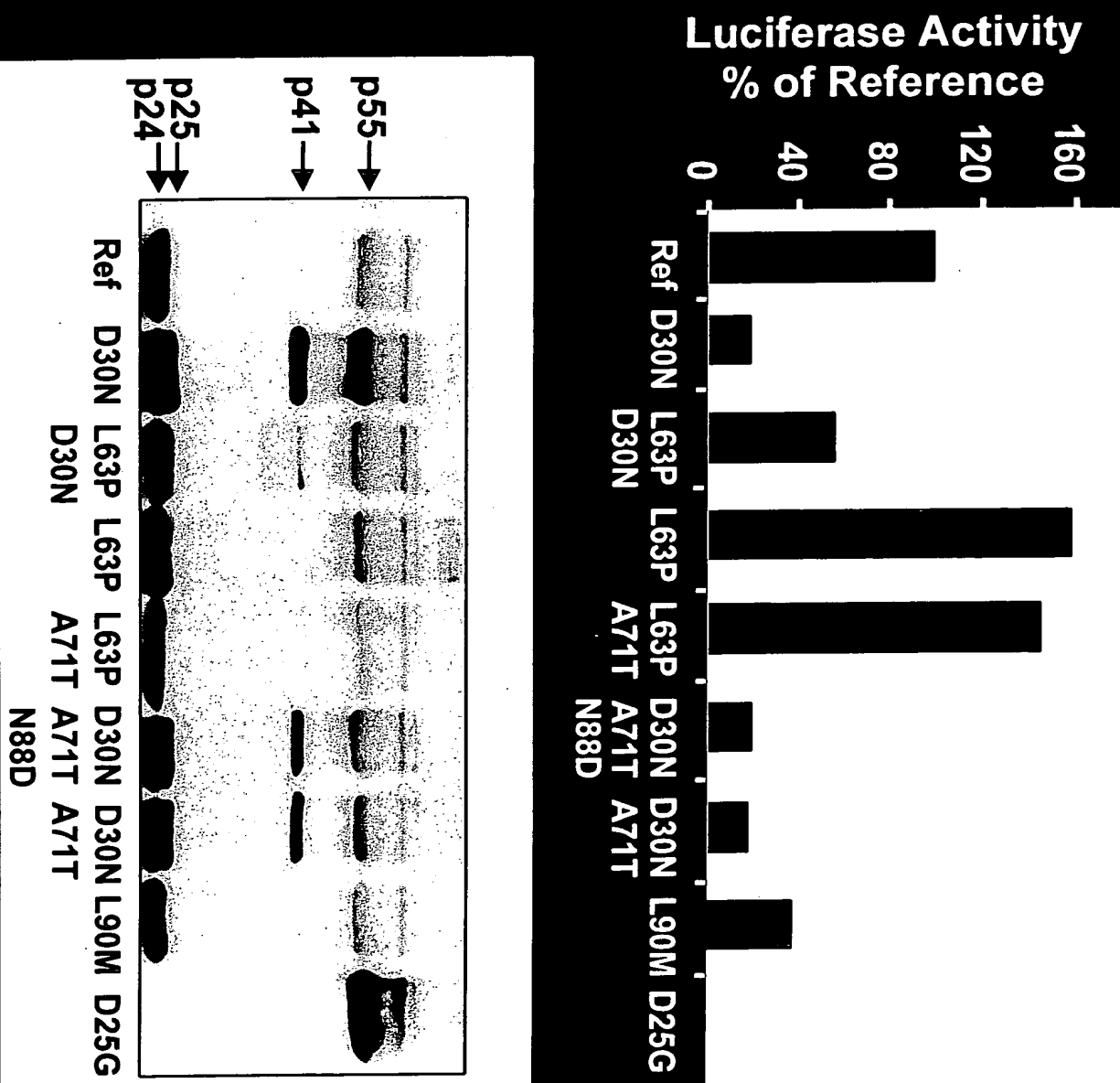
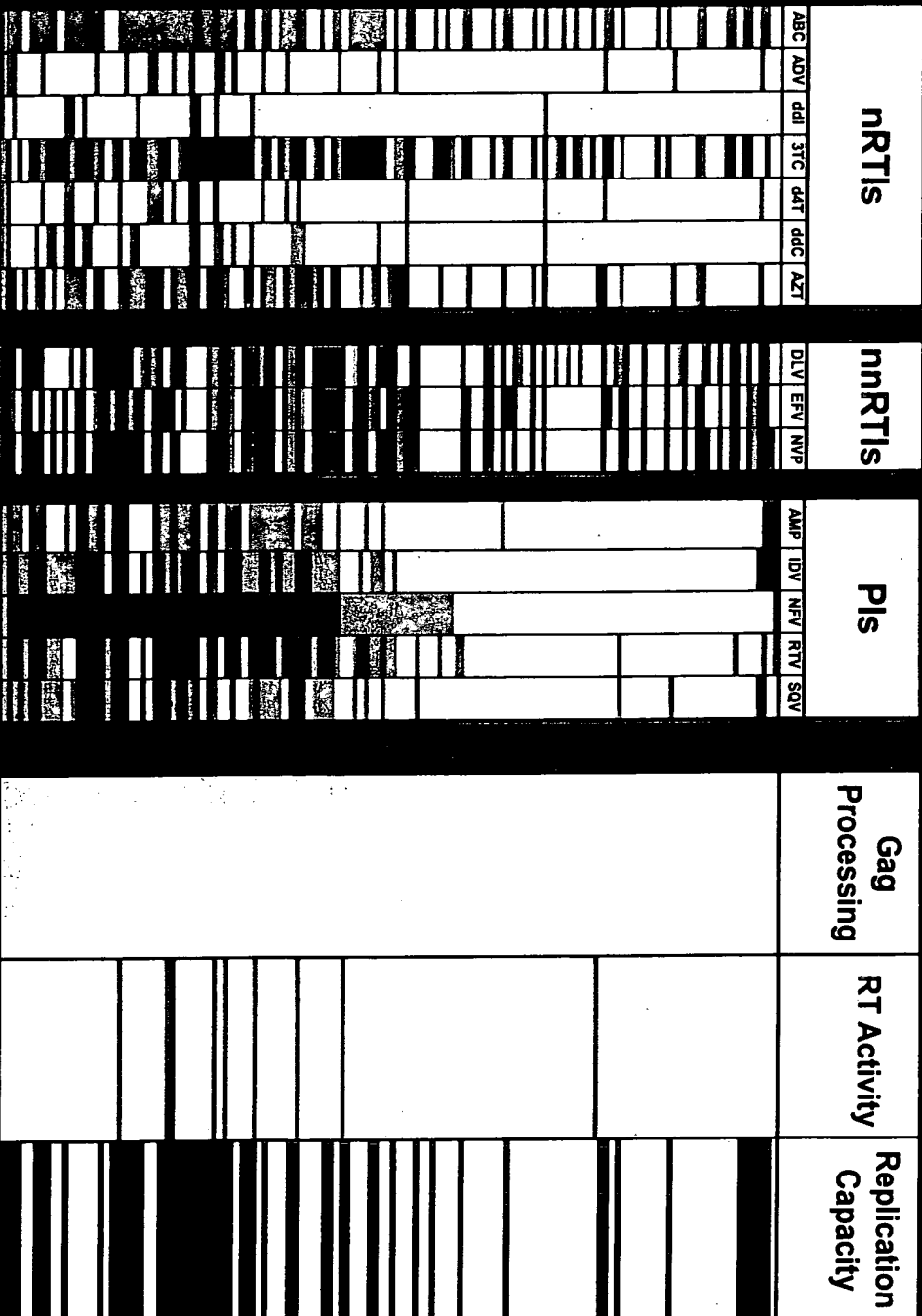


Figure F: Phenotypic Drug Susceptibility, Replication Fitness and PR/RT Function

Phenotypic Drug Susceptibility **Replication Fitness and PR/RT Function**



Fold Change in Susceptibility

- <0.4
- 0.4 to 2.5
- 2.5 to 10
- > 10

p41% > 10%

- RT% < 25
- RF% < 25

**Figure G: Relation of PI Resistance to
Replication Capacity**

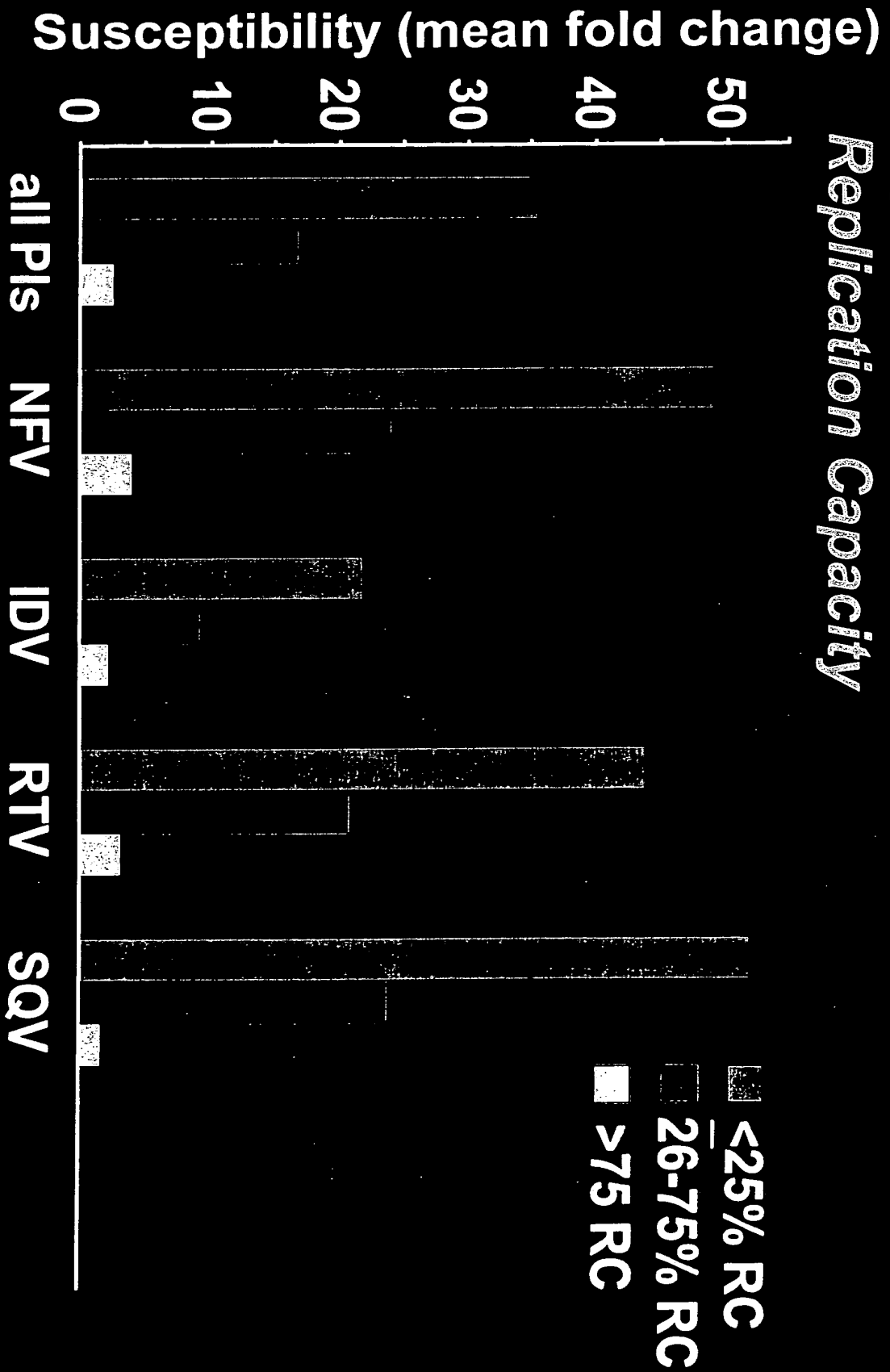


Figure H: Relation of NRTI and NNRTI Resistance to Replication Capacity

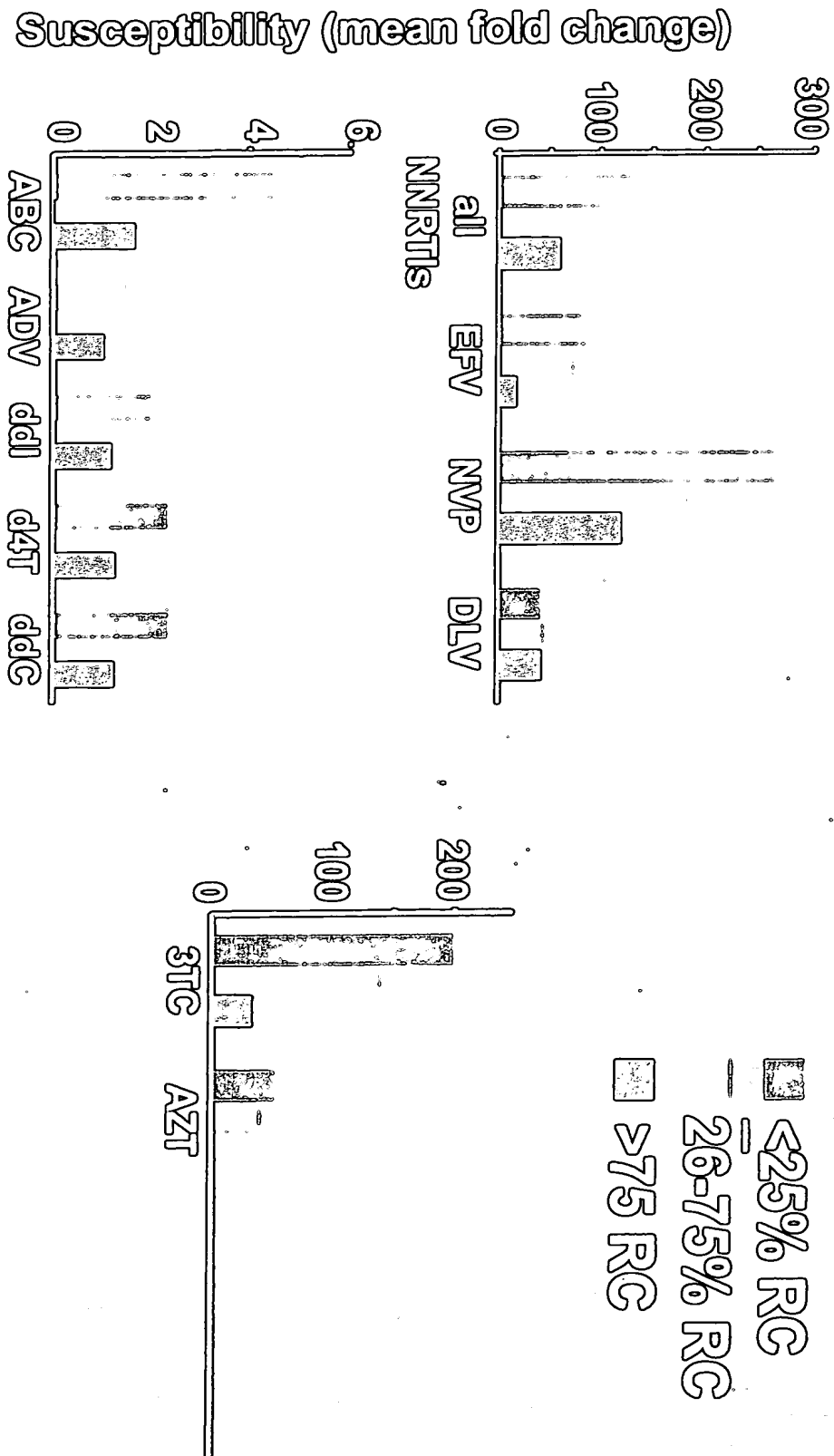


Figure 1: Low Replication Capacity is Associated with High Numbers of Mutations in Protease and L90M

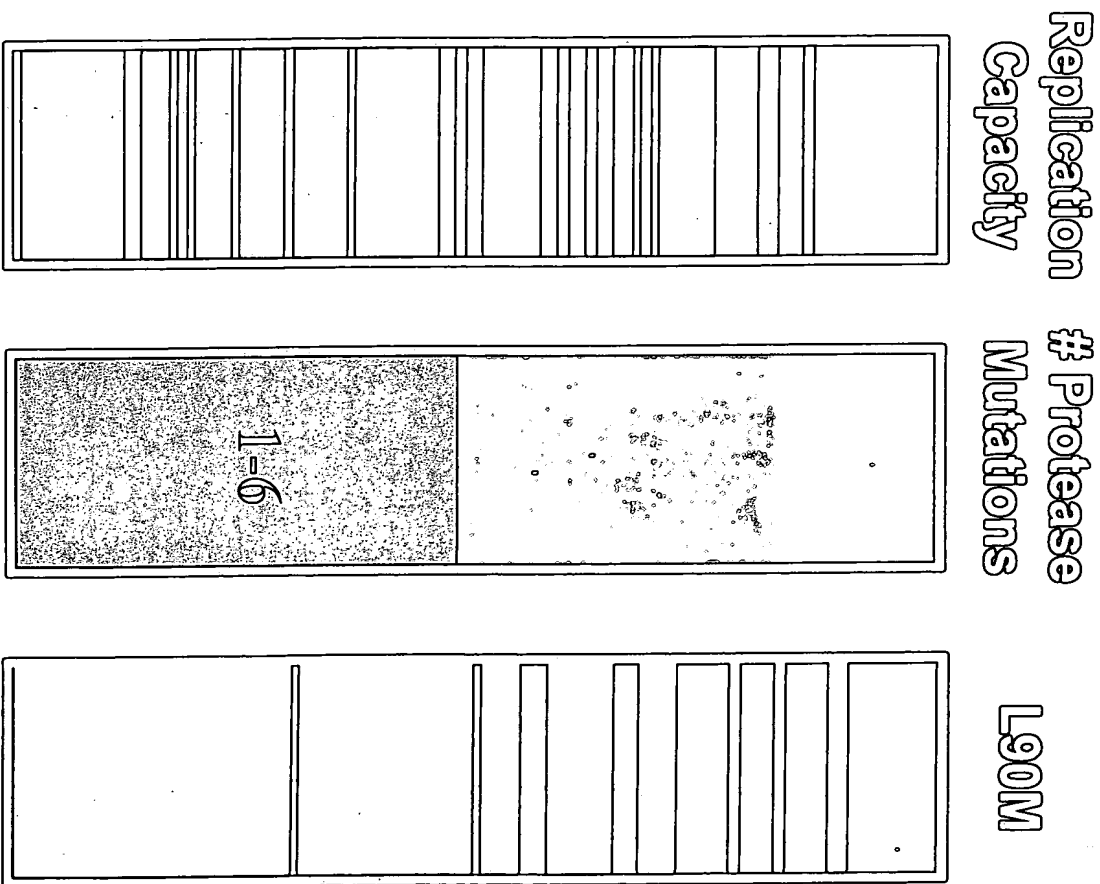


Figure J: Low Replication Capacity is Associated With Specific Protease Mutations

- D30N
- L90M PLUS mutations at 73, 20, 46, or 88

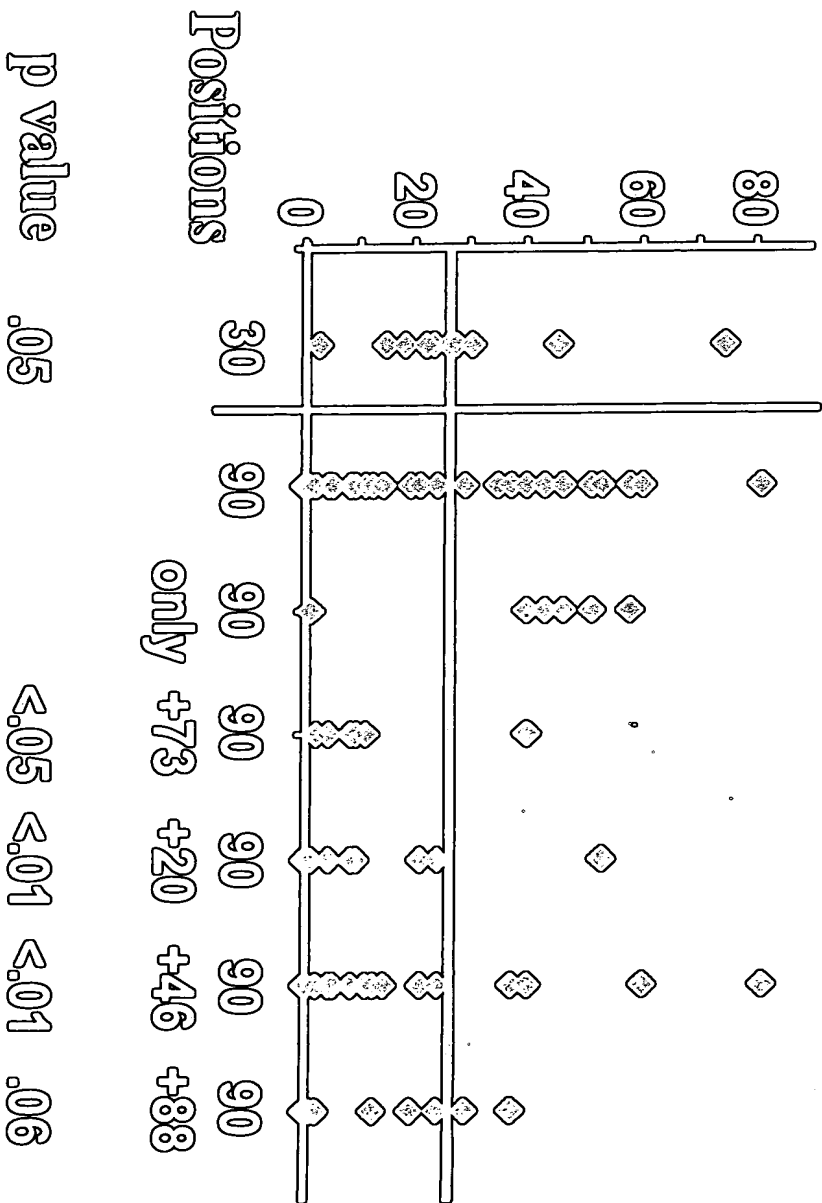


Figure K: Relation of NfV Phenotypic Drug Susceptibility, gag Processing and Replication Fitness

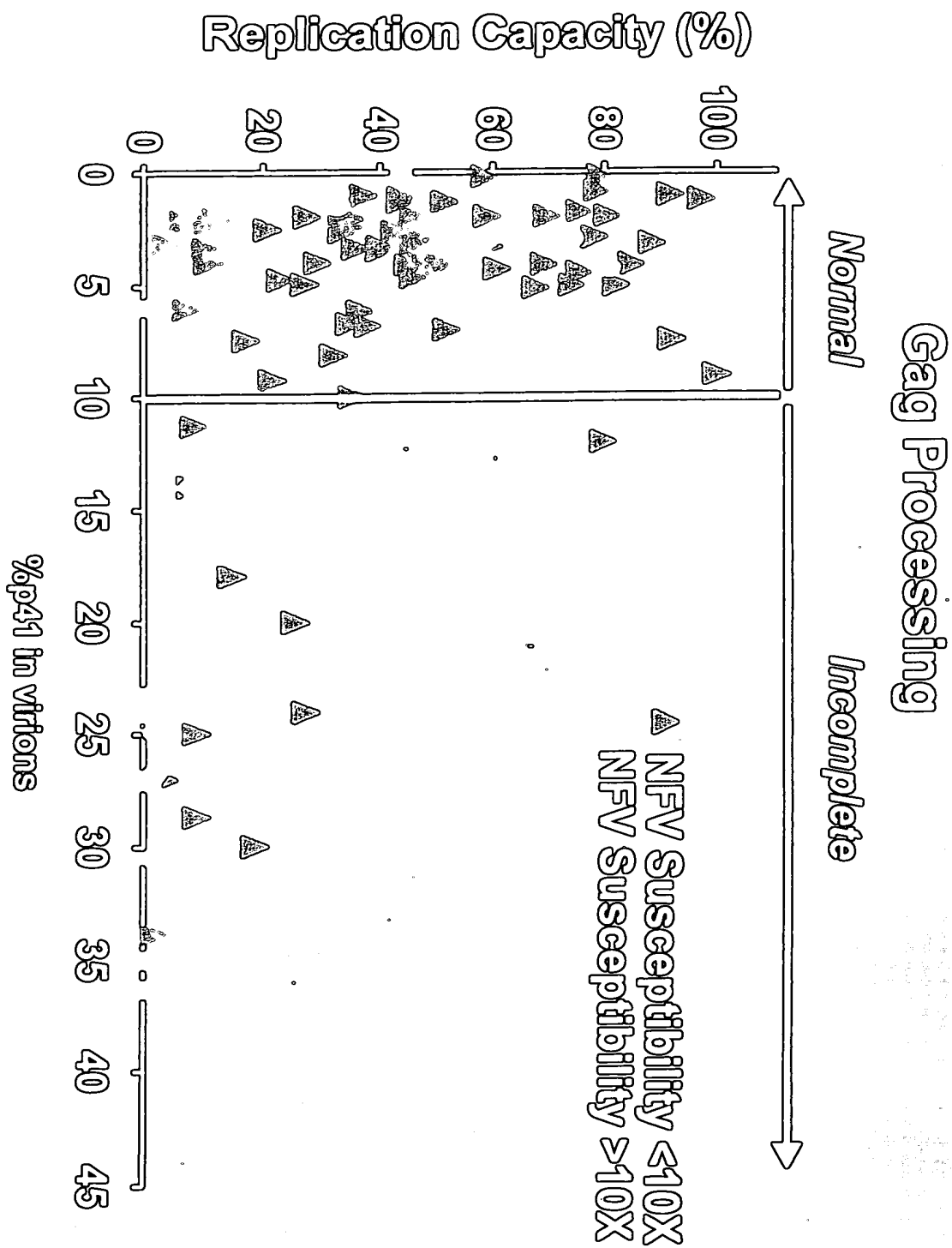


Figure L: Mutations in PR Associated with Gag Processing Defects

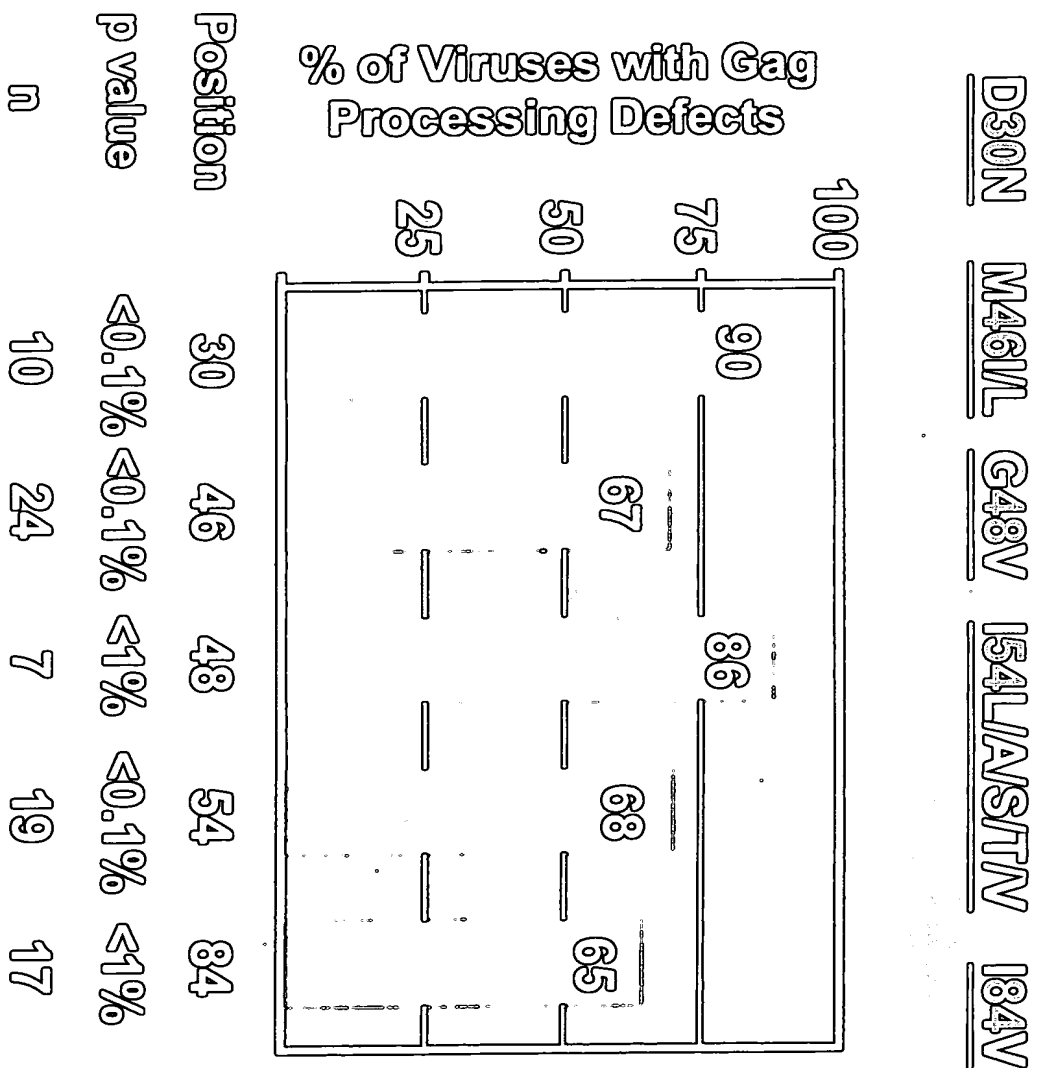


Figure M: Patient Virus Reversion to Drug Susceptibility after Treatment Interruption

	NRTI			NNRTI			PI					
week	AZT	3TC	D4T	ABC	NVP	DLV	EFV	SQV	IDV	RTV	NEV	AMP
day 0	3.7	1.0	2.8	1.3	<100	0.8	1.5	85	1.2	1.3	1.4	1.6
1	4.5	<100	3.3	1.4	<100	1.8	1.4	95	1.4	59	80	2.1
2	5.8	<100	3.2	1.4	<100	1.9	1.4	89	1.7	49	59	1.9
3	6.5	<100	2.7	1.5	<100	1.6	1.8	59	1.5	82	51	1.5
4	6.3	<100	3.1	1.5	<100	1.4	1.4	59	1.8	50	49	1.5
5	6.4	<100	3.0	1.7	<100	1.6	1.9	59	1.6	54	36	1.0
6	5.0	<100	2.8	1.9	<100	1.5	1.6	89	1.5	80	40	1.8
7	9.1	<100	4.1	1.2	<100	1.8	1.5	85	1.8	53	53	1.9
9	2.8	8.1	1.9	5.0	2.2	1.6	1.1	1.8	3.5	4.7	4.0	2.0
10	1.5	1.7	1.1	1.3	1.7	2.0	1.6	0.9	1.6	1.9	1.8	1.6
11	0.9	1.2	1.0	1.2	0.8	1.1	0.9	1.0	1.1	1.1	1.1	1.0
12	0.8	1.3	0.8	1.2	0.5	1.0	0.8	0.8	0.8	0.9	1.1	0.8
23	0.7	1.1	1.0	0.6	0.8	1.1	0.8	0.8	0.8	1.0	0.9	0.6

**Figure N: Patient Virus Reversion to Normal
Replication Fitness after Treatment Interruption**

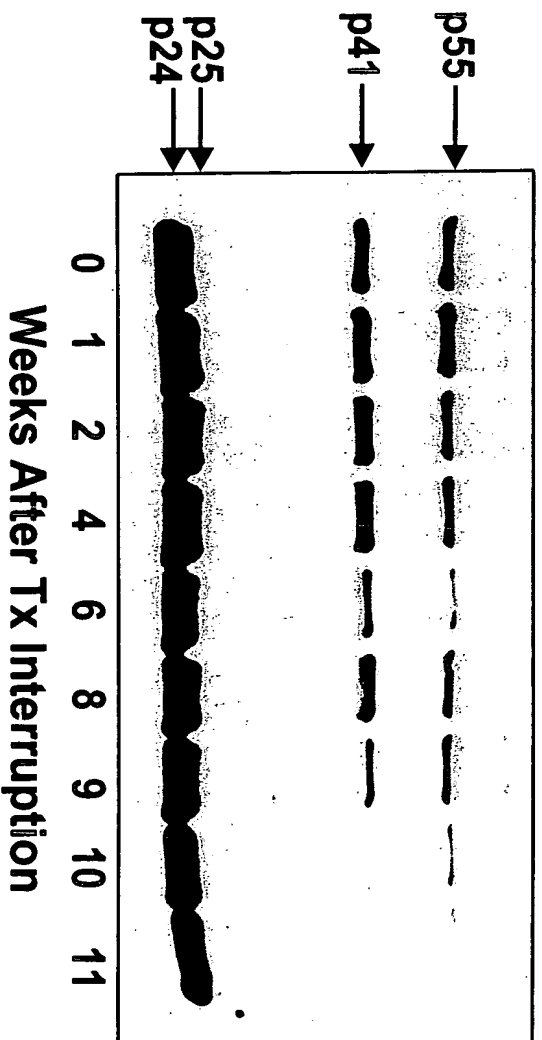
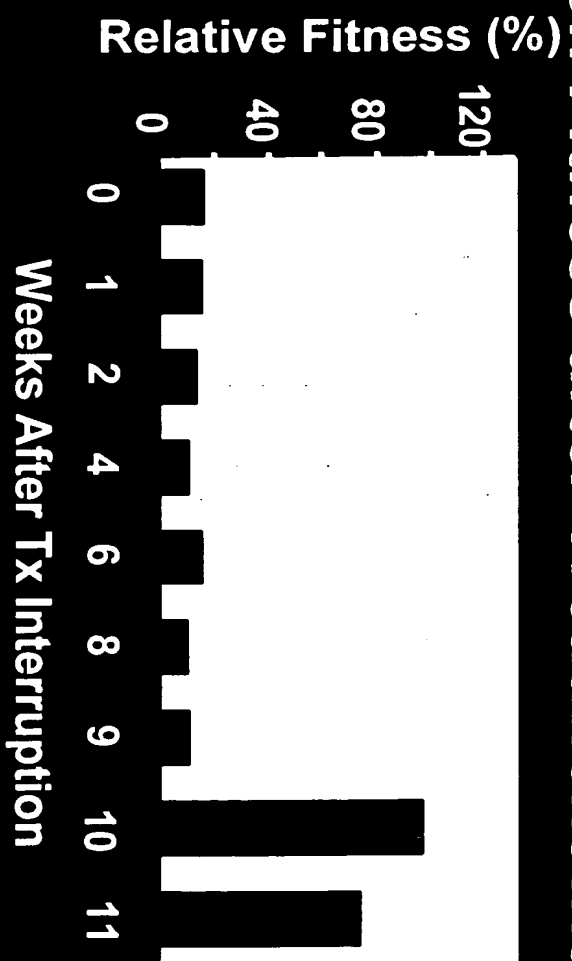


Figure O: Replication Fitness during Treatment Interruption

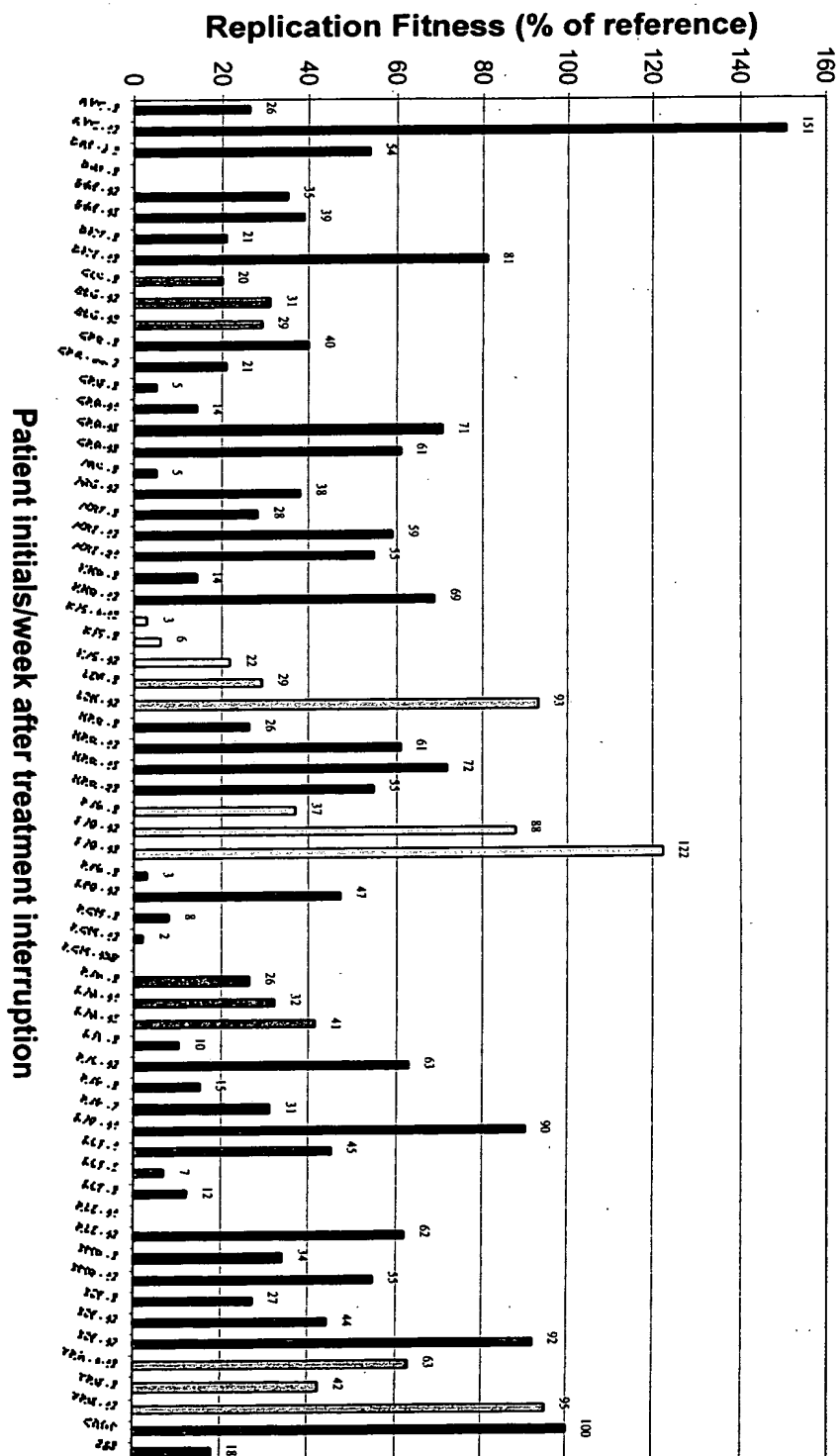


FIGURE P

To Measure Replication Capacity of Patient-Derived Recombinant Viruses

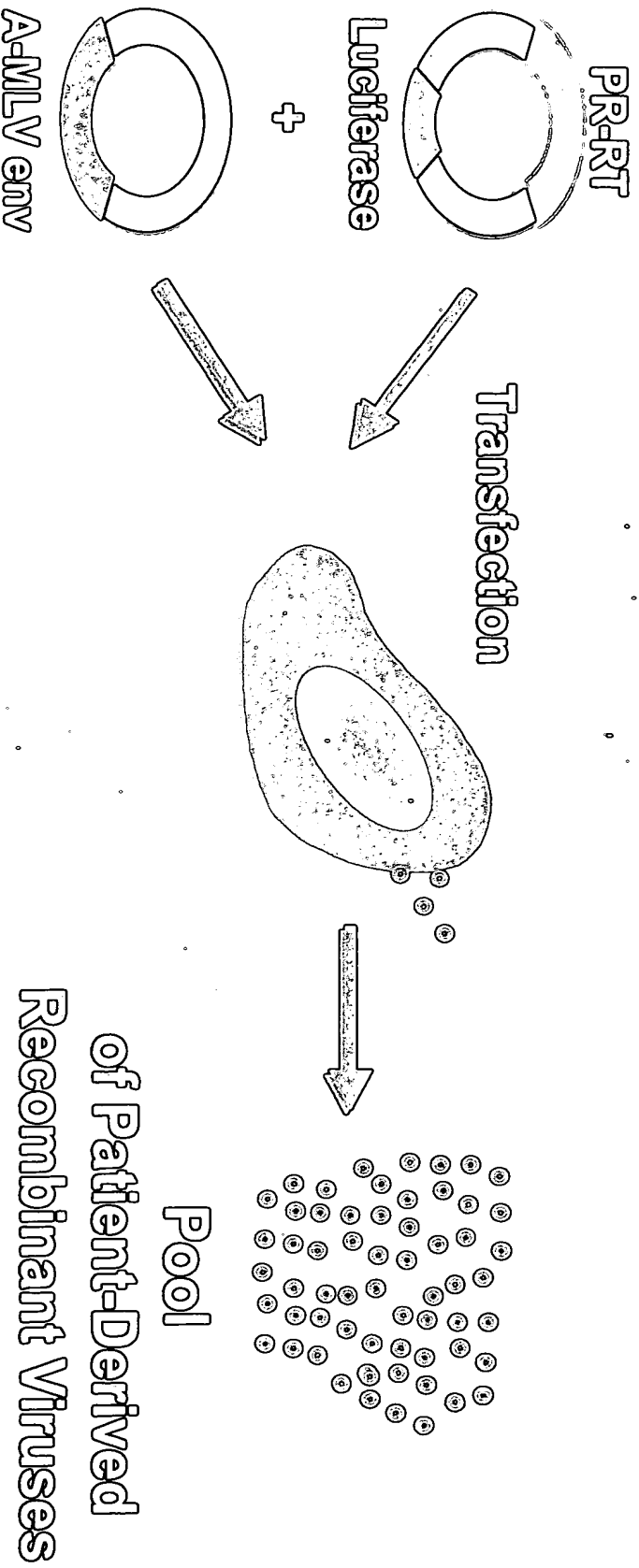
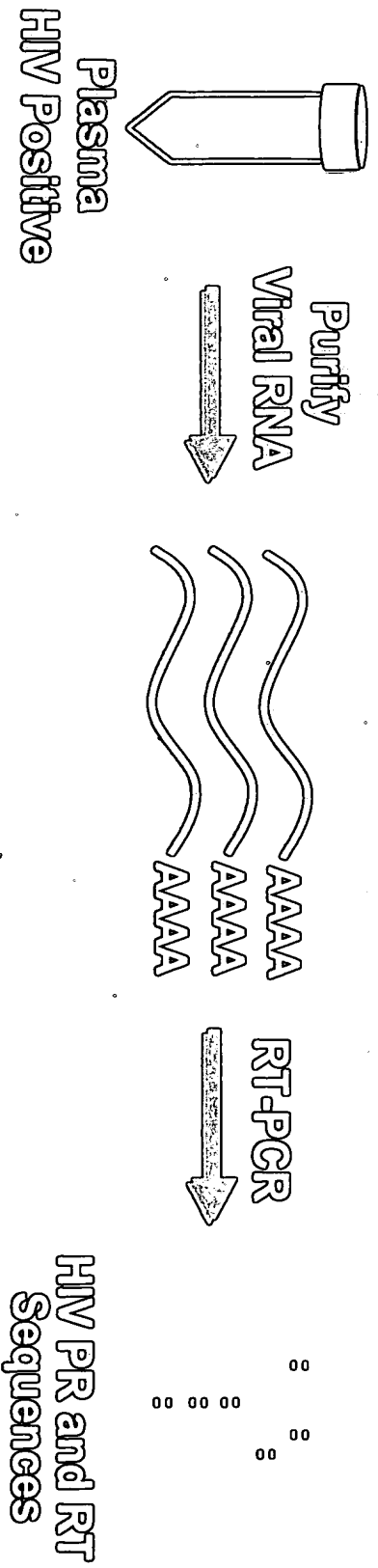


FIGURE 0

To Measure Replication Capacity of Patient-Derived Recombinant Viruses

